

Fermentation and non-digestibility of *Mangifera pajang* fibrous pulp and its polysaccharides

ABSTRACT

Populations of *Bifidobacterium longum* BB536, *Salmonella choleraesuis* JCM 6977, *Escherichia coli* ATCC 35922 and *B. pseudocatenulatum* G4 were monitored over 24 and 48 h. The digestibility of *Mangifera pajang* fibrous (MPF) and its polysaccharides by human gastric juice and human α -amylase were also determined. MPF and its polysaccharides increased the number of bifidobacteria but did not affect the growth of *S. choleraesuis* JCM 6977 or *E. coli* ATCC 35922; moreover, their effects were comparable to those of the commercial prebiotic inulin. *M. pajang* fibrous polysaccharides showed the highest non-digestibility by human gastric juice and human α -amylase compared to MPF and inulin; MPF showed a higher non-digestibility than inulin. MPF and its polysaccharides showed strong fermentation and non-digestibility properties, and thus it might be a prospective prebiotic that could be incorporated into food products.

Keyword: Prebiotic; Fermentation; *Mangifera pajang*; Polysaccharides